

1. A method of making electro-mechanical circuit elements comprising the acts of providing a structure having electrically conductive traces and supports, the supports extending from a surface of the substrate; providing a layer of nanotubes over the supports; and selectively removing portions of the layer of nanotubes to form ribbons of nanotubes that cross the electrically conductive traces, wherein each ribbon comprises one or more nanotubes.
2. The method of claim 1 wherein the act of providing a structure provides a structure in which the electrically conductive traces are doped silicon traces.
3. The method of claim 1 wherein the act of providing a structure provides a structure in which the electrically conductive traces are nanotubes.
4. The method of claim 1 wherein the act of providing a structure provides a structure in which the electrically conductive traces are ribbons of nanotubes.
5. The method of claim 1 wherein the act of providing a structure provides a structure in which the support structures are formed as rows of material and wherein the electrically conductive traces are substantially parallel to the rows.
6. The method of claim 5 wherein the traces are separated from the supports.

7. The method of claim 5 wherein the traces contact the supports.
8. The method of claim 1 wherein the traces are separated from the supports.
9. The method of claim 1 wherein the traces contact the supports.
10. The method of claim 1 wherein the act of providing a structure provides a structure in which the supports are made from silicon nitride.
11. The method of claim 1 wherein the act of providing a structure provides a structure in which the electrically conductive traces are over a layer of insulating material to electrically isolate the traces relative to one another.
12. The method of claim 1 wherein the act of providing a structure provides a structure in which the electrically conductive traces are each over insulating material to electrically isolate the traces.
13. The method of claim 1 wherein the act of providing a layer of nanotubes provides a non-woven fabric of nanotubes.
14. The method of claim 13 in which the fabric is grown on the structure.

15. The method of claim 13 in which the structure includes a sacrificial layer of material over the traces and in which the fabric is grown over the sacrificial layer.

16. The method of claim 14 in which the structure is treated with a catalyst to facilitate the growth of the fabric.

17. The method of claim 15 in which an upper surface of the sacrificial layer is treated with a catalyst to facilitate the growth of the fabric.

18. The method of claim 1 in which the act of selectively removing includes the act of patterning and etching the layer of nanotubes to form the ribbons.

19. The method of claim 13 in which the act of selectively removing includes the act of patterning and etching the fabric of nanotubes to form the ribbons.

20. The method of claim 14 wherein the growth of nanotubes is substantially unrestrained over the surface of the structure.

21. The method of claim 18 wherein the act of patterning and etching uses etchants that diffuse through the fabric.

22. The method of claim 1 wherein the layer of nanotubes is substantially a monolayer.

23. An electromechanical circuit, comprising:  
a structure having electrically conductive traces and supports extending from a  
surface of the substrate;  
nanotube ribbons suspended by the supports that cross the electrically conductive  
traces, wherein each ribbon comprises one or more nanotubes.
24. The circuit of claim 23 wherein the electrically conductive traces are doped  
silicon traces.
25. The circuit of claim 23 wherein the electrically conductive traces are nanotubes.
26. The circuit of claim 23 wherein the electrically conductive traces are ribbons of  
nanotubes.
27. The circuit of claim 23 wherein the supports are rows of material and wherein the  
traces are substantially parallel to the rows.
28. The circuit of claim 27 wherein the traces are separated from the supports.
29. The circuit of claim 27 wherein the traces contact the supports.
30. The circuit of claim 23 wherein the supports are made from silicon nitride.

31. The circuit of claim 23 wherein the electrically conductive traces are over a layer of insulating material to electrically isolate the traces relative to one another.

32. The circuit of claim 23 wherein the electrically conductive traces are each over insulating material to electrically isolate the traces.

33. The circuit of claim 23 wherein ribbons are of a non-woven fabric of nanotubes.

34. The circuit of claim 23 wherein the ribbons are substantially a monolayer of nanotubes.